

REMARKS/ARGUMENTS

Claims 18-20, 25-42, and 51-58 are pending in the application.

Claims 18, 26-30, 32, 38, 40-41, and 52 are amended. Support for the amendment is found throughout the specification and the originally filed claims. No new matter is added.

Claims 26, 27, 28, and 30 are amended to remove the amendments made in the last response and to return these claims to the claims as originally filed. Applicant respectfully submits that these claims are not narrowed by virtue of the present amendment and the subject amendment should not narrow the available scope of equivalents under the Doctrine of Equivalents.

The amendments to claims 38 and 40 are not narrowing, but broadening amendments. Therefore, the subject amendment should not narrow the available scope of equivalents under the Doctrine of Equivalents.

Aspects of the amendments to claims 18 and 38 are broadening with respect to the dispensing mechanism. Therefore, these amendments should not narrow the available scope of equivalents under the Doctrine of Equivalents.

Reconsideration is respectfully requested based on the remarks submitted below.

I. Interview

Applicant thanks the Examiner for the time and courtesy extended to Applicant's representative during the personal interview of April 11, 2006. During the interview, the Applicant's representative demonstrated samples. The Examiner and Applicant's representative discussed the above mentioned amendments, which the Examiner agreed were mostly broadening amendments. A copy of the interview summary is

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attached. However, the Examiner indicated that the amendments would not be entered because they would necessitate a new search. Applicant hereby submits an RCE. Favorable action is respectfully requested.

II. Objection to the Specification and Drawings

1. The specification is objected to that the title is not indicative of the invention to which the claims are directed.

Applicant thanks the Examiner for pointing this out. A new title of the invention is submitted. Favorable action is respectfully requested

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Applicant respectfully submits new drawing sheet 6 containing new figures 9, 10 and 11. Support for the new drawings is found throughout the specification as filed. No new matter is added. The Brief Descriptions of the Drawings on page 6 has also been amended to describe the added figures.

3. Paragraphs [0051], [0053], and [0055] are amended to add numerals to the features that correspond to the numerals indicated in the new figures where appropriate. Further, paragraph [0051] is amended to correct the spelling of the Japanese company "Kotobuki". No new matter is added.

Favorable action is respectfully requested.

III. Claim Rejections - 35 USC § 102

Claims 18, 25, 26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Green (5,829,976). The Examiner notes that Green discloses a therapeutic dental

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delivery device comprising a liquid oral therapeutic dental composition (column 1 line 67), an applicator of a brush (column 1 line 14), an activator 32 of a push button and a reservoir 30 located between the applicator and configured to store the composition, a cap 14 having an open end terminating at a position between the activator and the applicator, the activator is configured to dispense the composition from the reservoir to the applicator. The reservoir is confined within a removable cartridge (column 4 line 8). The device is made of plastic.

Applicant respectfully traverses the rejection.

Green discloses "a disposable fibrous dental applicator tip that is fed medicament via a cannula from the body or base of the instrument. The tip of the invention includes a flexible cannula core which is completely covered with a nonwoven, tufted surface which is capable of removing plaque. The fibrous applicator tip is specifically designed to massage the interproximal root surfaces and simultaneously deliver medication directed at the sources of periodontal diseases, such as bacteria and endotoxins in the gingival sulcus between the teeth." See col. 1, lines 53-62. (Emphasis added). "The design of the tip for penetration and scrub as well as the delivery of medication makes the device highly effective in removing plaque and neutralizing endotoxins and collagenases found in the periodontal pocket." See col. 2, lines 21-24. (Emphasis added). "A finger pump 32 is incorporated into the applicator base 12 to allow the user to apply pressure from any compressible fluid to the reservoir and force the medicament from the reservoir into the tip of the instrument. In one embodiment, finger pump 32 pressurizes air in an air bladder 34 and the compressed air is forced into the space 36 between the casing 29 and the reservoir wall 38. One-way valves 40 and 42 maintain the air pressure generated by the finger pump 32 so that the

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reservoir wall gradually collapses and forces the medicament through the cannula and into the tip of the instrument." See col. 4, lines 9-19. (Emphasis added)

Claim 18, as amended, recites, in relevant parts "a liquid oral therapeutic dental composition, said therapeutic dental composition comprises a moisture or temperature responsive composition that increases in viscosity upon dispensing into the oral cavity;

an applicator for applying the composition to the oral cavity, is selected from the group consisting of a brush, felt tip or a roller ball;

an activator coupled to the applicator, said activator is selected from the group consisting of a push button click mechanism and a twist and ratchet mechanism; ..."

(Emphasis added)

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d. 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d. 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements and their limitations must be found in the prior art reference to maintain a rejection based on 35 U.S.C. § 102(b).

Applicant respectfully submits that Green does not teach or motivate every element of the invention of claim 18. Therefore, claim 18 is patentable over Green.

Claims 25, 26, and 28 are dependent from claim 18 and are also rejected under 35 U.S.C. 102(b) as being unpatentable over Green. While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that their rejections are moot in view of the remarks made in connection with independent claim

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18. The dependent claims include all of the limitation of the base claim and any intervening claims, and recite additional features which further distinguish the claims from the cited references. Therefore, claims 25, 26, and 28 are also patentable under 35 U.S.C. 102(b) over Green.

Applicant respectfully requests that the rejection of claims 18, 25, 26, and 28 under § 102(b) as being anticipated by Green be withdrawn. Reconsideration is respectfully requested.

IV. Claim Rejections - 35 USC § 103

1. Claims 18, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace (1,362,937) in view of Marx (1,041,315). The Examiner notes that Grace discloses a therapeutic dental delivery device comprising a dental composition (page 1 line 50), an applicator 30 of a brush, an activator (page 2 line 61) and a reservoir 26 located between the applicator and the activator and configured to store the composition, the activator is configured to dispense the composition from the reservoir to the applicator; however, the Examiner admits that Grace does not show a cap, but cites Marx to teach a dental device comprising a cap for covering the applicator having an open end. Examiner therefore contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the device with the cap of Marx in order to protect the brush from dust and impurities in view of Marx. Examiner further contends that it would have been obvious to one of ordinary skill in the art made as to the specific activator, since interchanging of click, push button, or twist mechanism in the device involves only routine skill in the art and Grace suggests other mechanical embodiments. Grace shows the reservoir is confined within a removable cartridge.

Applicant respectfully traverses the rejection.

Grace discloses a fountain brush having a reservoir for receiving a replaceable refill cartridge 26 containing plastic or other material to be delivered to the bristles through a hollow shank by extrusion. See page 1, lines 11-19. A plunger has a plunger head 33 which is tapered to be pressed against the walls of the cartridge 26, and a plunger rod 34 having external threads for screwing the plunger rod 34 into the cartridge 26. (Emphasis added). See pages 2-3. "The plunger rod 34 is slotted longitudinally at its rear end ... whereby the rear end of the plunger is resilient so that the front end may be placed against a table ... so that pressure exerted forwardly on the cap 40 will cause the threaded feed barrel 39 to slip over the threads 37, thereby giving a quick turn of the plunger rod 34 to the rear position for another operation." (Emphasis added). See page 2, lines 113-125. Grace also discloses that "the threads 37, 28 in practice have a pitch such that one turn of the cap 40 will cause a sufficient quantity of the paste or the like to be extruded to answer for a single service" (page 2, column 2, line 126 to page 3, column 1, line 1).

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142.

Applicant respectfully submits that there is no teaching or motivation in Grace to motivate the invention of claim 18 since the deficiencies between the present invention and Grace, such as "a moisture or temperature responsive gel", is more than just the

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cap, as noted by the Examiner. Therefore, claim 18, as amended, is patentable over Grace.

Marx discloses a protective cover for a tooth brush. Since Marx is cited by the Examiner to teach a cap for covering the applicator, the deficiencies in Grace are not supplied by Marx. Therefore, claim 18 is patentable under 35 U.S.C. 103(a) over Grace (1,362,937) in view of Marx (1,041,315).

Claims 25 and 26 are dependent from claim 18, and are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace in view of Marx. While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that their rejections are moot in view of the remarks made in connection with independent claim 18. The dependent claims include all of the limitation of the base claims and any intervening claims, and recite additional features which further distinguish the claims from the cited references. Therefore, claims 25 and 26 are also patentable under 35 U.S.C. 103(a) over Grace in view of Marx, for at least the same reasons as discussed above.

Applicant respectfully requests that the rejection of claims 18, 25, and 26 under § 103(a) as being unpatentable over Grace in view of Marx be withdrawn. Reconsideration is respectfully requested.

2. Claims 19, 20, 27, 29, 30, 32, 34-37, 42, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Matthews et al. (2003/0232310). The Examiner contends that Green discloses a device that shows the limitations as described above; however, but admits that Green does not show the composition. The Examiner then cited Matthews et al. to teach a device comprising a liquid oral therapeutic dental composition comprising a moisture sensitive polymer complex and a water soluble salt

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and hydrogen peroxide or carbamide peroxide [0020]-[0022]. Therefore, the Examiner contends that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Green to have the composition of Matthews et al. in order to whiten or bleach one or more teeth. Green shows the reservoir is confined within a removable cartridge (column 4 line 8). Green shows the device at least in part made from thermoplastic material (column 4 line 22). The reservoir is located in a body section, the cap is in frictional engagement with the body. Examiner contends that it would have been an obvious matter of choice to one of ordinary skill in the art to have a retractable applicator in lieu of a cap in order to cover the applicator. Matthews et al. teach having instructions in order to show how to use the composition. Examiner contends that it would have been obvious to one of ordinary skill in the art as to the intended use of the composition as it comprises the carrier and agent as claimed.

Applicant respectfully traverses the rejection.

As noted above, claim 18 is patentable over Green since it does not teach or motivate either a moisture or temperature responsive gel or an applicator as recited in claim 18. For example, Green discloses a "finger pump 32 pressurizes air in an air bladder 34 and the compressed air is forced into the space 36 between the casing 29 and the reservoir wall 38. One-way valves 40 and 42 maintain the air pressure generated by the finger pump 32 so that the reservoir wall gradually collapses and forces the medicament through the cannula and into the tip of the instrument." See col. 4, lines 9-19. (Emphasis added). Likewise, Green does not teach or motivate the inventions of claims 38 and 42 and claims 38 and 42 are patentable over Green for at least the same reasons as claim 18.

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Matthews et al. discloses a wand for applying a whitening composition to one or more tooth. See paragraph [0003]. "(T)he invention involves the further step of applying the whitening composition to the wand applicator 10. This step may be achieved by bringing the wand applicator 10 into contact with the whitening composition, for instance by dipping the stem member 30 of the wand applicator 10 into the whitening composition." See paragraph [0017]. (Emphasis added). Contrary to the Examiner's contention, Matthews et al. do not teach or motivate a moisture or temperature sensitive composition. At the very most, Matthews et al. disclose a dipping method for a whitening composition. Therefore, the deficiencies in Green are not provided by Matthews et al. Thus, claims 18, 38 and 42 are patentable under 35 U.S.C. 103(a) over Green in view of Matthews et al. (2003/0232310).

Claims 19, 20, 27, 29, 30, 32, 34-37, 51, and 52 are dependent from claim 18, 38 and 42, respectively and are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Matthews et al. (2003/0232310). While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that their rejections are moot in view of the remarks made in connection with independent claims 18, 38, and 42. The dependent claims include all of the limitation of the base claims and any intervening claims, and recite additional features which further distinguish the claims from the cited references. Therefore, claims 19, 20, 27, 29, 30, 32, 34-37, 51, and 52 are also patentable under 35 U.S.C. 103(a) over Green in view of Matthews et al. for at least the same reasons as discussed above.

Applicant respectfully requests that the rejection of claims 19, 20, 27, 29, 30, 32, 34-37, 42, 51, and 52 under § 103(a) as being unpatentable over Green in view of Matthews et al. be withdrawn. Reconsideration is respectfully requested.

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3. Claims 19, 20, 27, 29, 30, 32, 34-37, 42, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace in view of Marx and further in view of Matthews et al. Examiner contends that the modified device discloses a device that shows the limitations as described above; however, they do not show the composition. Matthews et al. is cited to teach a device comprising a liquid oral therapeutic dental composition comprising a moisture sensitive polymer complex and a water soluble salt and hydrogen peroxide or carbamide peroxide [0020]-[0022]. Examiner contends that it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device to have the composition of Matthews et al. in order to whiten or bleach one or more teeth. Examiner contends that it would have been an obvious matter of choice to one of ordinary skill in the art to have a retractable applicator in lieu of a cap in order to cover the applicator. Matthews et al. teach having instructions in order to show how to use the composition.

Applicant respectfully traverses the rejection.

As previously stated, Grace does not teach or motivate all the limitations of claims 18, 38, and 42. Therefore, claims 18, 38 and 42 are patentable over Grace.

Marx does not supply the deficiencies of Grace, as also noted above. Therefore, claims 18, 38 and 42 are patentable over Grace in view of Marx.

Matthews et al. also do not supply the deficiencies of Grace in view of Marx, as Matthews et al. do not teach a moisture or temperature sensitive composition, as noted above. Also as noted, Matthews et al. disclose a dipping process. Therefore, claims 18, 38 and 42 are patentable over Grace in view of Marx and further in view of Matthews et al.

Claims 19, 20, 27, 29, 30, 32, 34-37, 51, and 52 are dependent from claims 18, 38

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and 42, respectively, and are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Matthews et al. (2003/0232310). While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that their rejections are moot in view of the remarks made in connection with independent claims 18, 38, and 42. The dependent claims include all of the limitation of the base claims and any intervening claims, and recite additional features which further distinguish the claims from the cited references. Therefore, claims 19, 20, 27, 29, 30, 32, 34-37, 51, and 52 are also patentable under 35 U.S.C. 103(a) over Grace in view of Marx in further view of Matthews et al. for at least the same reasons as discussed above.

Applicant respectfully requests that the rejection of claims 19, 20, 27, 29, 30, 32, 34-37, 42, 51, and 52 under § 103(a) as being unpatentable over Grace in view of Marx in further view of Matthews et al. be withdrawn. Reconsideration is respectfully requested.

4. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grace in view of Marx and further in view of Dragan (6,929,475). Examiner contends that the modified device discloses a device that shows the limitations as described above; however, they do not show plurality of bristles aligned generally parallel with lengthwise direction of the device. Dragan teaches a dental device comprising an applicator with plurality of bristles 246 aligned generally parallel with lengthwise direction of the device the composition. Examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the device to have the applicator of Dragan in order to apply material between teeth and to gum at base of the teeth in view of Dragan.

Applicant respectfully traverses the rejection.

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As previously stated, Grace does not disclose all the limitations of claim 18. The deficiencies in Grace are not provided by Marx.

Dragan discloses "an applicator pre-dosed with a material, such as a chemical or a medicament. The material is placed on an absorbent portion of the applicator and permitted to dry. The material is then in an inactive, stable state on the applicator. The material on the applicator is re-activated upon being exposed to water, saliva, liquids, or other activating materials." See col. 1, lines 35-41. Therefore, the deficiencies of Grace in view of Marx are not supplied by Dragan, because Dragan teaches a chemical or medicament in the dried state prior to application, which is teaching away from the composition of the present invention. Therefore, claim 18 is patentable over Grace in view of Marx, and further in view of Dragan.

Claim 31 is dependent from claim 18 and is rejected under 35 U.S.C. 103(a) as being unpatentable over Grace in view of Marx and further in view of Dragan (6,929,475). While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that their rejections are moot in view of the remarks made in connection with independent claim 18. The dependent claim includes all of the limitations of the base claim and any intervening claims, and recites additional features which further distinguish the claim from the cited references. Therefore, claim 31 is also patentable under 35 U.S.C. 103(a) over Grace in view of Marx in further view of Dragan.

Applicant respectfully requests that the rejection of claim 31 under § 103(a) as being unpatentable over Grace in view of Marx in further view of Dragan be withdrawn. Reconsideration is respectfully requested.

5. Claims 33, 38-41, and 53-58 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Green or Grace and Marx in view of Matthews et al. and further in

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view of Fischer et al. (6,083,489). Examiner contends that the modified device shows the limitations as described above; however, they do not show gel carrier polymer including polyvinylpyrrolidone. Fischer et al. teach carrier including carboxypolymethylene and polyvinylpyrrolidone (column 8 line 20). Examiner contends that it would have been obvious to one having ordinary skill in the art to further modify the device to include the thickener of Fischer et al. to provide bulk and suitable consistency to the carrier in view of Fischer et al. Fischer et al. show a polysaccharide polymer of xanthan gum, and Examiner contends that it would have been obvious to one of ordinary skill in the art to have a polymer of gellan gum.

Applicant respectfully traverses the rejection.

As previously stated, claims 18, 38, and 42 are patentable over Green or Grace and Marx.

Fischer et al. discloses "improved dental compositions which have enhanced plaque-removal capability compared to conventional toothpastes but which have no greater tendency, or even a decreased tendency, to abrade tooth enamel. Such dental compositions allow for greater plaque removal during a given brushing or other cleaning interval compared to conventional toothpastes. Such compositions achieve such improved plaque- and other soft debris-removal without causing increased removal of tooth enamel like conventional prophylaxis abrasives. Greater plaque-removal power is accomplished by means of larger, less jagged cleaning particles such as more spherically-shaped particles. Whereas the increased size of such particles greatly assists in loosening and dislodging plaque and other soft debris from tooth surfaces, their more round-edged and less jagged profile greatly reduces their tendency to scratch tooth enamel. The result is the ability to have far greater plaque-

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removal ability while reducing or eliminating the tendency to scratch enamel during plaque-removal procedures." See col. 3, lines 3-23. While the Examiner is correct that Fischer et al. discloses a thickener; however, there is no further teaching except to list the usual thickeners generally used, such as "poly carrageenan (derived from Irish moss), xanthan gum, guar gum, other polysaccharide gums, sodium carboxymethyl cellulose, starch, polyvinylpyrrolidone, hydroxyethylpropylcellulose, hydroxybutylmethylcellulose, hydroxypropylmethylcellulose, hydroxyethylcellulose, other cellulosic ethers, and carboxypolymethylene". See col. 8, lines 16-25. Also, thickeners in general do not have the properties of moisture or temperature responsiveness as recited in the present invention. The deficiencies of Green or Grace and Marx in view of Matthews et al. are not provided by Fischer et al. Therefore, claims 18, 38 and 42 are patentable over Green or Grace and Marx in view of Matthews et al. and further in view of Fischer et al.

Claims 33, 39-41, and 53-58 are dependent from claims 18, 38 and 42, respectively, and are rejected under 35 U.S.C. 103 (a) as being unpatentable over Green or Grace and Marx in view of Matthews et al. and further in view of Fischer et al. While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that their rejections are moot in view of the remarks made in connection with independent claims 18, 38, and 42. The dependent claims include all of the limitation of the base claims and any intervening claims, and recite additional features which further distinguish the claims from the cited references. Therefore, claims 33, 39-41, and 53-58 are patentable under 35 U.S.C. 103(a) over Green or Grace and Marx in view of Matthews et al. and further in view of Fischer et al.

Applicant respectfully requests that the rejection of claims 33, 38-41, and 53-58

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under § 103(a) as being unpatentable over Green or Grace and Marx in view of Matthews et al. and further in view of Fischer et al. be withdrawn. Reconsideration is respectfully requested.

IV. Information Disclosure Statement

Applicant hereby submits a supplemental information disclosure statement (IDS) attached to this paper. Applicant respectfully requests acceptance of the supplemental IDS.

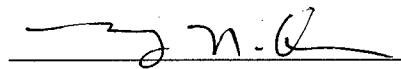
V. Conclusion

In view of the amendments and remarks set forth above, Applicant respectfully submits that the application is in condition for allowance and early notice thereof is respectfully solicited.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact the undersigned at 310-845-8501.

Dated:

Respectfully submitted,



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